

UNITED STATES PATENT AND TRADEMARK OFFICE

I, Susan ANTHONY BA, ACIS,

Director of RWS Group Ltd, of Europa House, Marsham Way, Gerrards Cross, Buckinghamshire, England declare;

1. That I am a citizen of the United Kingdom of Great Britain and Northern Ireland.
2. That the translator responsible for the attached translation is well acquainted with the French and English languages.
3. That the attached is, to the best of RWS Group Ltd knowledge and belief, a true translation into the English language of the accompanying copy of the specification filed with the application for a patent in France on July 1, 1999 under the number 99/08,499 and the official certificate attached hereto.
4. That I believe that all statements made herein of my own knowledge are true and that all statements made on information and belief are true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the patent application in the United States of America or any patent issuing thereon.



For and on behalf of RWS Group Ltd

The 22nd day of October 2004



P A T E N T

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The Director-General of the Institut National de la Propriété Industrielle certifies that the attached document is a true copy of an application for industrial property titleright filed at the Institute.

Drawn up in Paris, 04 OCT. 2004

On behalf of the Director-General of the
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The Patent Department Head

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PATENT, UTILITY CERTIFICATE

Intellectual Property Code - Book VI

Cerfa

No. 55-1328

REQUEST FOR GRANTConfirmation of filing by fax ☐

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Reserved for the INPI		1. NAME AND ADDRESS OF THE APPLICANT OR THE REPRESENTATIVE TO WHOM THE CORRESPONDENCE IS TO BE ADDRESSED	
DATE OF SUBMISSION OF THE DOCUMENTS 1 JUL 1999		COMPAGNIE FINANCIERE ALCATEL Département PI Monsieur Edmond SCIAUX 30 avenue Kléber 75116 PARIS No. of permanent power of attorney Correspondent's references Telephone PG 7176 F°102531PA/ES 0140676300	
NATIONAL REGISTRATION 99/08,499			
DEPARTMENT OF FILING 75 INPI PARIS B			
DATE OF FILING 1.07.99			
2. APPLICATION			
Nature of the industrial property right			
<input checked="" type="checkbox"/> patent <input type="checkbox"/> divisional application			
→ initial application			
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<input type="checkbox"/> patent		<input type="checkbox"/> utility certificate No. date	
Compilation of the search report			
<input type="checkbox"/> deferred <input checked="" type="checkbox"/> immediate			
The applicant, as a physical person, asks to pay the fee by instalments <input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Title of the invention (maximum 200 characters)			
METHOD OF MONITORING THE USE OF A CHARGEABLE DYNAMIC SIGNALING PORT OF AN INTER-EXCHANGE TRUNK			
3. APPLICANT(S)		Legal form	
SIREN No. 5 .4 .2 .0 .1 .9 .0 .9 .6 APE-NAF code			
name and forenames (underline the surname) or company name			
ALCATEL		Société anonyme	
nationality/nationalities French			
Full address(es)		Country	
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4. INVENTOR(S)		The inventors are the applicants <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If the answer is no, provide a separate designation	
5. REDUCTION OF THE RATE OF FEES		<input type="checkbox"/> requested for the first time <input type="checkbox"/> requested prior to filing; attach copy of the favourable decision	
6. PRIORITY DECLARATION OR APPLICATION FOR THE BENEFIT OF THE FILING DATE OF A PRIOR APPLICATION			
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8. SIGNATURE OF THE APPLICANT OR REPRESENTATIVE (name and capacity of the signatory - registration No.)		SIGNATURE OF THE RECEIVING OFFICIAL	
[signature] E. SCIAUX / LC 40 B		SIGNATURE AFTER REGISTRATION OF THE APPLICATION AT THE INPI (illegible signature)	

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INDUSTRIELLE**PATENT, UTILITY CERTIFICATE****DESIGNATION OF THE INVENTOR**

(if the applicant is not the inventor or the sole inventor)

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75800 Paris Cédex 08
Tel: 01 53 04 53 04 - Fax: 01 42 93 59 30**NATIONAL REGISTRATION NO.**

99/08,499

F° 102531PA – ES/EDD

TITLE OF THE INVENTION:METHOD OF MONITORING THE USE OF A CHARGEABLE DYNAMIC SIGNALING PORT OF AN
INTER-EXCHANGE TRUNK**THE UNDERSIGNED**Société anonyme :
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NOTE: In exceptional cases, the name of the inventor may be followed by that of the company to which he belongs (membership company) when the latter is other than the company which is the applicant or proprietor.

Date and signature(s) of the applicant(s) or of the representative

01.07.1999 PARIS

[signature]
E. SCIAUX

**Method of monitoring the use of a chargeable dynamic signaling
port of an inter-exchange trunk**

The invention relates to a method of monitoring the use of a chargeable dynamic signaling port of a trunk connecting two exchanges in a telecommunications network.

The introduction of trunks connecting exchanges which have at least one chargeable dynamic signaling port leads to the need to be able to monitor the use of such ports so that those paying for their use can control their costs. This was not the case previously, when the trunks between exchanges were systematically kept active, when they were in service, as was the case in particular in older synchronous time-division switching networks.

It has therefore become necessary to be able to monitor the use of such chargeable dynamic ports to prevent them being set up and used by applications, for example periodic maintenance or management applications, for non-urgent transmissions, possibly at low bit rates. Using ports set up in this way can hardly be economic.

The invention therefore proposes a method of monitoring the use of a chargeable dynamic signaling port of a trunk connecting two exchanges, in particular in connection with applications which communicate via exchanges and which are likely to require to use such ports.

According to one feature of the invention, this method provides for assigning rights of use to each application enabling it either to have a port of this kind set up and then to use it or only to use a port of this kind if it has already been set up, insofar as a right of use is assigned to it.

According to one feature of the method according to the invention there is provision for immediately informing applications likely to require to use a chargeable dynamic port that a port of this kind has been set up to enable said applications to use said port as fully as possible.

According to one feature of the method according to the invention the right assigned to an application is monitored in the exchange initiating a call request to set up a call via a chargeable dynamic signaling port of this kind and the same application possibly has a different right according to the exchange from which the setting up of a call is initiated.

According to one feature of the method according to the invention there is provision for assigning rights of use in time periods that can be changed.

The invention, its features and its advantages are explained in the following description, which is given with reference to the drawings listed below.

Figure 1 is a block diagram of a telecommunications network structure with two exchanges.

5 Figure 2 is a block diagram of a port monitoring system as used by the monitoring method of the invention.

10 The method according to the invention of monitoring the use of ports is intended to be applied in the situation of a telecommunications network in which at least two exchanges, such as the two exchanges 1 and 1' show diagrammatically in Figure 1, are connected by a trunk 2 which has ports at least some of which are of the chargeable and dynamic signaling type, such as the ports A1 and A'1, for example. These chargeable and dynamic signaling ports can be set up and deactivated on demand and as required. This is known in the art. In the context of the trunk 2, they can coexist with other ports which are set up permanently when they first enter service.

15 As a general rule the ports of the trunk 2 are used to set up calls, in particular voice and/or data calls, and to transmit signaling via circuits which constitute the trunk. Those circuits can be operated differently and possibly of different kinds. This is known in the art. Each exchange is assumed to have corresponding dedicated ports. In particular, it is usual for transmissions to be effected via the trunk 2 from one of the exchanges 1 or 1' or possibly from and/or to another exchange such as the exchange 1", for particular applications. Those applications can correspond to satisfying requirements specific to at least some users, for example a manager-secretary type application, periodic transmission of large volumes of data, etc. They can also correspond to tasks to be carried out which are specific to the network, for example user terminal supervision, call charging, operator terminal management, etc.

20 In the context of the method according to the invention, there is provision for assigning a right of use to each of the applications which may need to use a chargeable dynamic port to communicate via a path using the trunk 2 and possibly via a chargeable dynamic port of that trunk. For example, a path of this kind can be set up from a port 1m of the exchange 1" and via the two exchanges 1, 1' and the trunk 2 using the supposedly chargeable dynamic port A1.

25 Such a right of use is assigned by an authority responsible for supervising the management of the exchanges. If necessary, this right in respect of a port can be

assigned to only one of the two exchanges connected by the trunk. It can also be different for the same application, according to the exchange at which a request to use the port is formulated. In this example, and as shown diagrammatically in Figure 2, the rights of use assigned to the applications are stored in a database. They are preferably stored in the exchange(s) through which an application can initiate a call request to set up a call via a path using a chargeable dynamic port.

The rights assigned to each application to use one or more chargeable dynamic ports are stored in a database 3 which is accessible by the exchange(s) concerned. In a preferred embodiment of the invention a database 3 of this kind is individually associated with or integrated into each exchange and holds the data relating to the rights of the applications which can attempt to use an outgoing chargeable dynamic port from the individually associated exchange.

In this example, an application can be authorized to use a chargeable dynamic port for calls that it wishes to set up via the trunk from one or both of the two exchanges connected by this trunk, or not. There is provision for assigning rights to use a chargeable dynamic port which can differ according to the application, one of these rights enabling setting up and use of a chargeable dynamic port, for example, and another right allowing a port of this kind to be used only if it has already been set up.

There is also provision for the setting up of a chargeable dynamic port by an authorized application to lead to the creation of data to be communicated to the applications which can then use their right to use a chargeable dynamic port already set up at one or possibly both exchanges. There is also provision for this data to be used by the applications waiting to transmit data via a port of this kind to ensure as complete as possible use of the traffic capabilities offered by this port during the time for which said port remains active. A chargeable dynamic port remaining active is of course conditional on the existence of traffic via that port and the port is rendered inactive as soon as possible, with a delay for returning to an inactive state which can vary as a function of the application(s) which most recently use this port to transmit data.

As symbolized in Figure 2, the method according to the invention is used at the time of each call request 4 to set up a call via a chargeable dynamic port at the exchange 1, 1' or 1" initiating the call request. An access right monitoring process 5 is then undertaken in that exchange as a function of the calling application and the call request is routed 6 via the intended chargeable dynamic port, or not, according to

the right assigned to the application, as stored in the database 3 for the exchange. Rejection 7 of a call set up request by the access right monitoring process 5 then leads either to the application having to wait, if it only has the right to use a chargeable dynamic port already set up, or by routing of the waiting application to a different port.

Finally, there is also provision for the right of use assigned to an application to be subject to a time condition and therefore to be usable by this application only within a predetermined time period, in order to limit costs and/or regulate traffic. The right of the application(s) concerned is then restricted or cancelled outside the time periods for it.

CLAIMS

- 5 **1.** A method of monitoring the use of a chargeable dynamic signaling port (A1, A'1) of a trunk (2) connecting two exchanges (1, 1'), in particular in connection with applications which communicate via exchanges and which are likely to require to use such ports, characterized in that there is provision for assigning rights of use to each application enabling it to have a port of this kind set up and then to use it or only to use a port of this kind if it has already been set up, insofar as a right of use is assigned to it.
- 10 **2.** A method according to claim 1 wherein there is provision for immediately informing applications likely to require to use a chargeable dynamic port that a port of this kind has been set up to enable said applications to use said port as fully as possible.
- 15 **3.** A method according to claim 1 or claim 2 wherein the right assigned to an application is monitored in the exchange initiating a call request to set up a call via a chargeable dynamic signaling port of this kind and the same application possibly has a different right according to the exchange from which the setting up of a call is initiated.
- 4.** A method according to any of claims 1 to 3 wherein there is provision for assigning rights of use in time periods that can be changed.

FIG. 1

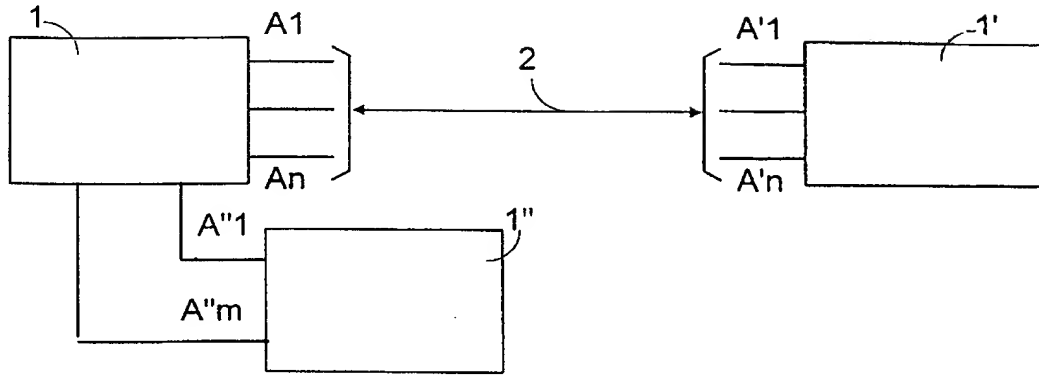


FIG. 2

